

REMARKS

File History

Claims 1-5, 8-21, 25-26, and 28-35 were previously pending in the application. In the outstanding Office action (OA) of 8/5/2011, the following rejections, objections, requirements and other actions appear to have been made:

- **Claims 1-4, 8-11, 13-21, 25-26, and 28-31** were rejected under 35 USC §103(a) as being obvious over Mori et al. (US 6,326,981) {= ref #1} as combined with Official Notice {1.5} and as further combined with Martin et al. (US 6,714,206) {= ref #2} { OA pg. 9, top, where OffNotice is at pg. 10 ¶2 }
- **Claims 5, 12** were rejected under 35 USC §103(a) as being obvious over Mori {1} as combined with Official Notice {1.5} and with Martin {2} and as further combined with Francis (US 5,841,411) {= ref #3} { OA pg. 25, ¶8 }
- **Claims 32-35** were rejected under 35 USC §103(a) as being obvious over Mori {1} as combined with Martin {2} and as further combined with Ahn (7,259,755) {= ref #4} { OA pg. 26, ¶9 }
- **Claims 1-5, 8-21, 25-26, and 28-35** were rejected under 35 USC §112, first paragraph, as failing to comply with the written description requirement. { OA pg. 6, bottom of page }
- Throughout the Office action (OA), requirements were made for explanation or correction.

Summary of Current Response

Claims 1, 8, 13, 15, 20, 32-35 are amended.

Claims 32-35 are canceled.

Applicant's Argument #1: Unreasonable narrowing of the claims in one regard

A first argument that Applicant respectfully presents here and requests the Examiner's indulgence for, is the proposition that; in some respects, the Examiner has unfairly given **too narrow** of an interpretation to some of the claim language.

It is true that application Fig. 6 shows an RBGB sequence in the top row of "repeating group" 602 and a GBRB sequence in the bottom row of dash-boxed area 602.

However, nowhere in Claim 1 is there a requirement that the first through fourth colored subpixels, which are "consecutively arranged" in "a row" according to Claim 1, be considered in a left-to-right order. It is just as legitimate to view them in a right-to-left direction.

Indeed, if area 602 (the "repeating group") of application Fig. 6 is viewed from a right-to-left perspective, then it may be seen that the claim language is indeed fully supported and no violation of the written description requirement is present in that regard.

It is respectfully submitted that the above, first explanation demonstrates to a clear and convincing level that the recitation of the "first" and "third" consecutive positions of "a row" (e.g., top row of 602 of Fig. 6) as being occupied by a "first" color is fully supported and does not introduce new matter.

In other words, in the above, Applicant has rebutted the §112 rejections and has demonstrated how Claim 1 (as here amended, as well as the other, similarly amended claims) may be read against application Fig. 6.

Argument #2: Unreasonable Definition of "Tessellated"

The Examiner is correct that the word, "tessellated" does not appear as such (per se) in the originally filed specification and, had the case been such that the word, "tessellated" appeared in a vacuum within the claims, the Examiner would have been entitled to consult with extrinsic evidence sources such as dictionaries for ascertaining the common and ordinary meaning of the word, "tessellated".

However, "tessellated" does not appear here in a vacuum within the claims. The opening line in the body of Claim 1 recites a plurality of interconnected concepts, namely, "a panel" [[*which is*]] "substantially tessellated" by "a subpixel repeating group" [Bracketed text and emphasis added.]

It is axiomatic that "every limitation in the claim must be given effect rather than considering one in isolation from the others" --In re Geerdes, 491 F.2d 1260, 1262-63 (CCPA 1974). See also, Stumbo v. Eastman Outdoors, Inc., 508 F.3d 1358, 1362 (Fed. Cir. 2007) (denouncing claim constructions which render phrases in claims superfluous).

The present application uses the phrase "subpixel repeating group" numerous times and each time in conjunction with a tiling structure that tiles or tessellates substantially the entire display area (a possible exception being at that peripheral edges of a display area if the repeating groups are staggered) with essentially no gaps.

More specifically:

[0017] FIG. 2 shows a panel comprising a repeat subpixel grouping 202, as further described in the '353 application. As may be seen, repeat subpixel grouping 202 is an eight [[*even number*]] subpixel repeat group, comprising a checkerboard of red and blue subpixels with two columns of reduced-area green subpixels in between. If the standard 1.times.1 dot inversion scheme is applied to a panel comprising such a repeat grouping (as shown in FIG. 2), then it becomes apparent that the property described above for RGB striped panels (namely, that successive colored pixels in a row and/or column have different polarities) is now violated. This condition may cause a number of visual defects noticed on the panel--particularly when certain image patterns are displayed. ... It will be appreciated that the embodiments described herein are equally applicable to all such even modulus repeat groupings.

[Bracketed text and emphasis added, some text skipped over.]

[0027] FIG. 6 is yet another embodiment of a panel 600 comprised substantially of a subpixel repeating group 602 of even modulo. In this case, group 602 is comprised of a checkerboard of red 104 and green 106 subpixels interspersed with two columns of blue 108 subpixels. As noted, it is possible (but not mandatory) to have the blue subpixels of smaller width than the red or the green subpixels. As may be seen, two neighboring columns of blue subpixels may share a same column driver through an interconnect 604, possibly with the TFTs of the blue subpixels appropriately remapped to avoid exact data value sharing.

[Emphasis added.]

It is respectfully submitted that the insular, and two level-defined definition (including determining what is "mosaic"?) that the previous Office action picked out for the word, "tessellated" is not consistent with the way that the present application describes the "subpixel repeating group" and how it *substantially* comprises the complete filling in of the panel area with no gaps. A display panel is not a floor to be "decorated" by tiles. The "subpixel repeating group" is not a decoration but rather a functional structure for rendering an image. Accordingly, looking to the floor-decorating sense of "mosaic" is inappropriate here.

For sake of avoiding further argument on this point, a further clarification has been added to the claims to the effect that the subpixel repeating group is substantially populating the display area and that the subpixel repeating group is a smallest such repeated group that substantially populates and substantially tessellates the display area with essentially no gaps.

For sake of completeness and in counterpoint to the insular dictionary definition picked out in the outstanding Office action, it is respectfully submitted that many other and more consistent definitions for "tessellate" are available and should instead be used:

Example 1: 2) (intransitive, geometry) Of a two-dimensional shape, such that multiple copies of itself placed edge to edge cover an area leaving no space between the shapes.

3) (transitive, geometry) To completely fill (an area) when multiple copies of one or more two-dimensional shapes are placed edge to edge.

-- <http://en.wiktionary.org/wiki/tessellate> as provided on 8/23/2011 [Emphasis added.]

Example 2: (of shapes) to fit together in a pattern with no spaces in between

-- <http://dictionary.cambridge.org/dictionary/british/tessellate?q=tessellate> as provided on 8/23/2011 [Emphasis added.]

Example 3: verb: [with object] decorate (a floor) with mosaics.

Mathematics cover (a plane surface) by repeated use of a single shape, without gaps or overlapping.

-- <http://oxforddictionaries.com/definition/tessellate?region=us> as provided on 8/23/2011 [Emphasis added.]

Example 4: "Vertex operations module 30 transforms image data from pixel operations module 40 into a raster coordinate system. Usually, this includes tessellation, or breaking down a continuously smooth surface into triangular surfaces. Rasterization hardware 50 usually interpolates the tessellated vertices to populate the pixels within each of these surfaces. In some applications, rasterization hardware 50 may also request a texture map from texture memory 80 which is then applied to all of the pixels in rasterization hardware 50. These pixels are then passed to frame buffer 70."

-- US Pat. 6,933,941 (Peercy, et al.: Scene representation method and system) issued August 23, 2005 on an application filed April 10, 2001, [Emphasis added.]

The above examples constitute evidence in the record that there are more complete definitions of the term "tessellate" which are more consistent with the subject matter of the present application and with how an ordinary artisan would understand the use of said term in this context even when the term is construed as broadly as reasonably possible in light of the specification and how the ordinary artisan would interpret the same.

In other words, Applicant has demonstrated that the floor-decorating sense of "tessellate" and "mosaic" is inappropriate for the pertinent art and that the interpretation adopted by the PTO in the previous Office action is unreasonably overbroad.

PRINCIPLES OF LAW

...

Although the PTO emphasizes that it was required to give all "claims their broadest reasonable construction" particularly with respect to [the] use of the open-ended term "comprising," *see Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501 (Fed. Cir. 1997) ("the open-ended term comprising ... means that the named elements are essential, but other elements may be added"), this court has instructed that any such construction be "consistent with the specification, ... and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990). The PTO's construction here, though certainly broad, is unreasonably broad. The broadest construction rubric coupled with the term "comprising" does not give the PTO an unfettered license to interpret claims to embrace anything remotely related to the claimed invention. Rather, claims should always be read in light of the specification and teachings in the underlying patent. *See Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 217 (1940).

In re Suitco Surface, Inc., 603 F.3d 1255, 1260 (Fed. Cir. 2010).

--[Emphasis added, some text skipped, text is from Ex Parte Doren et al, (BOPAI 06/10/2011) Appeal 2011-001054, Application 10/760,640, nonprecedential]

Remarks re further amendments to Claim 1

In reviewing the previous version of Claim 1, Applicant noted some inconsistencies that warranted further revision. There was no antecedent basis for "the violations" in Claim 5. Claim 1 is amended to recite violations. Not all of the even number of subpixels in all embodiments are "individually addressable" subpixels. For example, in Fig. 6, the two blue subpixels of the repeating group are not "individually addressable". This has been corrected.

It is submitted that no new matter has been introduced and the here-amended version of Claim 1 is in better condition for allowance.

**Traversal of rejection of here-amended Claim 1 as based on Mori (US 6,326,981),
Martin (US 6,714,206) and Official Notice**

The rejection at OA page 9, which appears to be based on Mori Fig. 15, does not account for the word "consecutively" within the recitation: "which first through fourth colored subpixels are consecutively arranged in a row in the recited order" of Claim 1. Therefore a *prima facie* case of unpatentability is not present with respect to the here-amended Claim 1.

Mori does not teach or suggest the specific arrangement of subpixels as recited in Claim 1, and the outstanding grounds of rejection do not explain how and why the ordinary artisan would come to arrive at the recited subject matter by starting with the teachings of Mori.

More specifically, Mori defines his subpixel repeating group as being a 3-subpixel "ONE PIXEL" --see for example Figs. 7B, 8B, 9B, ... of Mori. This does not meet the requirement in Claim 1 calling for "... and a fourth colored subpixel, which first through fourth colored subpixels are consecutively arranged in a row".

The Office Action concludes:

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the panel of Mori to arrange two different colored subpixels consecutively in a row to avoid arranging two same colored subpixels consecutively in a row, as taught by Marin, in order to provide an uniform color illumination by placing the four adjacent subpixels having two different colors in a pattern such that the two subpixels having a same color are not adjacent to each other in a horizontal direction and in a vertical direction.

[Emphasis added. OA pages 11-12]

Applicant respectfully submits that the so-called Drawing 1 and Drawing 2 of the Office action are based on Mori Fig. 15 where there are two so-called, ONE PIXEL blocks snapped together with one of these ONE PIXEL blocks rotated 180 degrees. That Fig. 15 already shows "two different colored subpixels consecutively in a row, namely, BG. In Mori's Fig. 15, the B's are adjacent to each other in the vertical direction. That is what Mori teaches there. There is no evidentiary basis for concluding that an ordinary artisan would be

motivated to partially modify Mori, and no explanation of why. Thus, it is respectfully submitted that the outstanding grounds of rejection lack rational underpinning.

More importantly, the outstanding grounds of rejection fail to say that the proposed modification would lead to the claimed subject matter. Therefore, technically speaking, the i's and t's for making out a *prima facie* case of obviousness have not been dotted.

Reconsideration is respectfully requested, particularly in view of the above amendments which Applicant respectfully submits will moot the outstanding issues between Applicant and Examiner.

The amendments to the remaining ones of the amended claims are substantially in line with those made to Claim 1 and therefore the arguments and explanations presented for Claim 1 may also be applied to those remaining claims.

CONCLUSION

It is believed that all outstanding grounds of rejection have been overcome or traversed in light of the foregoing. Applicant respectfully requests entry of the amendments and reexamination with favorable outcome. A two month extension of time is requested.

Authorization is hereby given to charge any fees due or credit any overpayments in regard to this communication to deposit account 50-5029. If the Examiner has any questions or concerns, a telephone call to the below listed attorney at (408) 331-1675 is welcomed and encouraged.

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Gideon Gimlan

Signature: /gideon gimlan/

Respectfully submitted,

/gideon gimlan/
Gideon Gimlan
Attorney for Applicants
Reg. No. 31,955
Customer No. 90323

Gideon Gimlan, Esq.
Innovation Counsel LLP
21771 Stevens Creek Blvd. Suite 200
Cupertino, CA 95014
Voice: (408) 331-1675
email: ggimlan@innovationcounsel.com